ICDC7 Conference Agenda

Monday, September 26, 2005

0900-0930 **Opening Address - *James Mahoney***
Chair: ***Pieter Tans***

0930-1000 ***Ken Caldeira***
Long-term consequences of continued carbon dioxide emission to the atmosphere

1000-1030 ***Jae Edmonds***
Future global energy and carbon requirements

1030-1100 BREAK

1100-1130 ***James Zachos***
An aberration in the global carbon cycle 55 million years ago: Implication for carbon cycle

1130-1200 ***David Victor***
Climate Change: Designing an effective response

1200-1300 LUNCH

Session: ***The Fate of Fossil-Fuel Carbon Emission***
Chair: ***Takakiyo Nakazawa***

1300-1330 ***Nicolas Gruber*** (FF-335)
Oceanic sources and sinks for atmospheric CO_2

1330.1345 ***Tobias Naegler*** (FF-246)
Simulating the bomb radiocarbon cycle: Closing the budget

1345-1400 ***Ralph Keeling*** (FF-328)
Global oceanic and land carbon sinks from the Scripps atmospheric oxygen flask sampling network

1400-1415 ***Christian Rödenbeck*** (FF-113)
What can atmospheric potential oxygen (APO) fluxes tell us about the carbon cycle?

1415-1445 BREAK

Session: ***The Fate of Fossil-Fuel Carbon Emission***
Chair: ***Takakiyo Nakazawa***

1445-1500 ***John Lin*** (FF-37)
What can we learn from intensive atmospheric sampling field programs?

1500-1515 ***Steven Piper (for Charles Keeling)*** (FF-326)
A 50 year record of the evolution of the meridional gradient in atmospheric CO_2 and its relation to fossil fuel emissions

1515-1530 ***John Miller*** (FF-410)
A decreasing trend in N. Hemisphere carbon uptake since 1992

1530-1545 ***Andy Jacobson*** (FF-224)
Oceanic constraints on the terrestrial CO_2 fertilization sink

1545-1600 ***Cyril Crevoisier*** (FF-359)
A direct carbon budgeting approach to study CO_2 sources and sinks

1600-1700 ***Panel Discussion: ECONOMIC DEVELOPMENT, CARBON, AND CLIMATE***
Chair: ***Pieter Tans***

Tuesday, September 27, 2005

Session: ***The Fate of Fossil-Fuel Carbon Emission***
Chair: ***Liliane Merlivat***

0800-0830 ***Chris Sabine*** (FF-138)
Decadal changes in ocean carbon uptake

0830-0845 ***Nicholas Bates*** (FF-237)
Two decades of ocean CO_2 variability and the influence of wind and storms on the air-sea CO_2 flux near Bermuda

0845-0900 ***Galen McKinley*** (FF-301)
Pacific dominance to global air-sea CO_2 flux variability

0900-0915 ***Jaqueline Boutin*** (FF-64)
Variability of ocean partial pressure and air-sea CO_2 fluxes in the subantarctic zone of the Southern Oceans

0915-0930 ***Ben McNeil*** (FF-77)
An empirical estimate of the Southern Ocean CO_2 flux

0930-1000 Poster Session

1000-1030 BREAK

Session: ***The Fate of Fossil-Fuel Carbon Emission***
Chair: ***Liliane Merlivat***

1030-1045 ***Ingeborg Levin*** (FF-276)
Evaluation of CO and SF_6 as quantitative tracers of fossil fuel CO_2: An experimentalist's view

1045-1100 ***T.J. Blasing*** (FF-87)
Increasing the temporal and spatial resolution of carbon emissions data for the USA

1100-1115 ***Hitoshi Mukai*** (FF-208)
Long term observation of CO_2 concentration and its isotopic ratio over the Western Pacific

1115-1130 ***Jan Kaiser***(FF-167)
Marine productivity estimates from O_2/Ar ratios and oxygen isotopes in the Equatorial Pacific

1130-1145 ***Toshinobu Machida*** (FF-378)
World wide measurements of atmospheric CO_2 and other trace gas species using commercial airliners

1145-1200 ***Jim Bishop*** (FF-385)
New views of the oceanic carbon cycle from autonomous explorers

1200-1300 LUNCH

1300-1400 Poster Session
1400-1430 BREAK
1430-1500 Poster Session

Session: ***The Fate of Fossil-Fuel Carbon Emission***
Chair: ***Christian Rödenbeck***

1500-1515 ***Peter Bergamaschi*** (FF-88)
CH_4 total columns from SCIAMACHI - comparisons with atmospheric models

1515-1530 ***Richard Engelen*** (FF-7)
Estimation of atmospheric CO_2 from AIRS infrared satellite radiances in the ECMWF data assimilation system

1530-1545 ***Rebecca Washenfelder*** (FF-355)
Initial results from the Total Carbon Column Observing network

1545-1600 ***Wouter Peters*** (FF-35)
Top-down regional CO_2 fluxes for North America estimated from NOAA/CMDL observations

1600-1700 ***Panel Discussion: FATE OF FOSSIL-FUEL CO_2***
Chair: ***Phillippe Ciais***

1900-2100 ***RECEPTION at National Center for Atmospheric Research (NCAR)***

Wednesday, September 28, 2005

Session: *Land Use and the Terrestrial Carbon Cycle*
Chair: *Gen Inoue*

0800-0830 ***George Hurtt*** (LU-257)
The underpinnings of land use history: Three centuries of global gridded land use transitions, wood harvest activity, and resulting secondary landscapes

0830-0845 ***Susan Trumbore*** (LU-370)
The age of carbon respired from terrestrial ecosystems

0845-0900 ***Steve Pacala*** (LU-66)
Modeling the history of terrestrial carbon sources and sinks

0900-0915 ***Hanqin Tian*** (LU-388)
Spatial and temporal patterns of CO_2, CH_4, and N_2O fluxes in the terrestrial ecosystems of China since 1980

0915-9030 ***Eric Sundquist*** (LU-318)
Effect of soil management on carbon erosion and burial in the conterminous United States

0930-1000 Poster Session

1000-1030 BREAK

Session: ***Land Use and the Terrestrial Carbon Cycle***
Chair: ***Gen Inoue***

1030.1100 ***Jim Randerson*** (LU-365)
Radiative forcing from a changing boreal fire regime

1100-1115 ***David Turner*** (LU-300)
Monitoring effects of interannual variation in climate and fire regime on net ecosystem production with remote sensing and modeling

1115-1130 ***Jing Chen*** (LU-272)
Estimating landscape-level carbon fluxes from tower CO_2 mixing ratio measurements

1130-1145 ***Yoshikazu Ohtani***(LU-209)
Seasonal and interannual variability in net ecosystem CO_2 exchange at six forest flux sites in Japan

1145-1200 ***Lin Huang*** (LU-403)
Signals of photosynthesis and respiration in boreal forests: Response to environment changes retrieved from isotope measurements of atmospheric CO_2

1200-1300 LUNCH

1300-1400 Poster Session

1400-1430 BREAK

1430-1500 Poster Session

Session: ***Land Use and the Terrestrial Carbon Cycle***
Chair: ***Lin Huang***

1500-1530 ***S. Venevsky*** (LU-210)
Interannual variability in terrestrial carbon exchange using an ecosystem-fire model and inverse model results

1530-1545 ***E.S. Euskirchen*** (LU-428)
Importance of recent shifts in soil thermal dynamics on growing season length, productivity, and C sequestration in terrestrial high-latitude ecosystems

1545-1600 ***Niall Hanan*** (LU-336)
(In and) Out of Africa: estimating the carbon exchange of a continent

1600-1700 ***Panel Discussion: LAND USE AND TERRESTRIAL ECOSYSTEMS***
Chair: ***Bev Law***

Thursday, September 29, 2005

Session:	***Carbon Cycle Response to Environmental Change***
Chair:	***Chris Field***
0800-0830	***Jean Marc Barnola***
	Greenhouse gas (CO_2, CH_4) and climate evolution since 650kyrs deduced from Antarctic ice cores
0830-0845	***Peter Koehler*** (EC-118)
	Proposing a mechanistic understanding of atmospheric CO_2 during the late Pleistocene - a contribution to the EPICA challenge
0845-0900	***Fortunat Joos*** *(EC-27)*
	Atmospheric CO_2, carbon isotopes, the sun, and climate change over the holocene
0900-0915	***Galina Churkina*** (EC-227)
	Persistence of nitrogen limitation over terrestrial carbon sequestration
0915-9:30	***Phillippe Ciais***(EC-72)
	Unprecedented reduction in primary productivity in Europe caused by the 2003 heat wave and drought
0930-1000	Poster Session
1000-1030	BREAK
Session:	***Carbon Cycle Response to Environmental Change***
Chair:	***Chris Field***
1030-1045	***Arne Winguth*** (EC-51)
	CO_2 uptake of the marine biosphere: Feedbacks between the carbon cycle and climate change using a dynamic earth system model
1045-1100	***Steve Wofsy*** (EC-348)
	What are the most important factors for climate-carbon cycle coupling?
1100-1115	***Inez Fung*** (EC-241)
	The changing carbon cycle.
1115-1130	***Patricia Cadule*** (EC-217)
	New coupled climate-carbon simulations from the IPSL model: from validation against atmospheric CO_2 and satellite data to feedback analysis
1130-1145	***Jean Pierre Ometto***(EC-366)
	The Amazon and the modern carbon cycle.
1145-1200	***Leon Allen, Jr.*** (EC-313)
	Hazards of temperature on food availability in changing environments (HOT-FACE): Global warming could cause failure of seed yields of major food crops
1200-1300	LUNCH
1300	Excursions/Free time

Friday, September 30, 2005

Session: ***Impacts of High CO_2 on Land and Ocean Ecosystems***
Chair: ***Jean-Marc Barnola***

0800-0830 ***James Orr*** (HI-327)
Unraveling the decline in high-latitude surface ocean carbonate

0830-0900 ***Jack Morgan*** (HI-10)
The role of water relations in driving grassland ecosystem responses to rising atmospheric CO_2

0900-0915 ***Yiqi Luo*** (HI-155)
Nitrogen regulation of carbon sequestration in terrestrial ecosystems in response to rising atmospheric CO_2

0915-0930 ***Sergei Blagodatsky*** (HI-148)
Substrate induced growth response of soil and rhizosphere microbial communities under elevated CO_2

0930-0945 ***Christoph Heinze*** (HI-84)
The potential of upper ocean alkalinity controls for atmospheric carbon dioxide changes

0945-1015 Poster Session

1015-1045 BREAK

Session: ***Managing the Carbon Cycle***
Chair: ***Paulo Artaxo***

1045-1115 ***Lynn Orr***
Stabilization of the CO_2 concentration in the atmosphere: Can geological sequestration help?

1115-1130 ***Peter Haugan*** (MC-40)
Metrics to assess the mitigation of global warming by carbon capture and storage

1130-1145 ***Sam Krevor*** (MC-95)
Mineral carbon sequestration - still a viable option

1145-1200 ***Dennis Ojima*** (MC-265)
Information needs for adaptive management of the carbon cycle: From regional carbon budgets to a holistic decision-support framework

1200-1300 LUNCH

1300-1400 Poster Session

1400-1430 BREAK

1430-1500 Poster Session

Session: ***Managing the Carbon Cycle***
Chair: ***Paulo Artaxo***

1500-1515 ***Stephen Del Grosso*** (MC-270)
Role of agricultural management mitigating carbon and other greenhouse emissions

1515-1530 ***Baixin Chen*** (MC-187)
Effect of vertical DIC distribution on storage efficiency of direct injection of CO_2 into the ocean

1545-1600 ***Chris Jones*** (MC-232)
Impacts of climate-carbon cycle feedbacks on emission scenarios to achieve stabilization

1600-1700 ***Panel Discussion: MANAGING CARBON IN A HIGH CO_2 WORLD***
Chair: ***Pep Canadell***